

[0104] The memory and the computer program instructions can be configured, with the processor for the particular device, to cause a hardware apparatus such as SCS 810, MME/SGSN/MS 820, HSS 830, or MTC-IWF 840, to perform any of the processes described above (see, for example, FIGS. 3-7). Therefore, in certain embodiments, a non-transitory computer-readable medium can be encoded with computer instructions that, when executed in hardware, perform a process such as one of the processes described herein. Alternatively, certain embodiments of the invention can be performed entirely in hardware.

[0105] Furthermore, although FIG. 8 illustrates a system including an SCS, MME/SGSN/MS, HSS, and MTC-IWF, embodiments of the invention may be applicable to other configurations, and configurations involving additional elements, as illustrated herein.

[0106] One having ordinary skill in the art will readily understand that the invention as discussed above may be practiced with steps in a different order, and/or with hardware elements in configurations which are different than those which are disclosed. Therefore, although the invention has been described based upon these preferred embodiments, it would be apparent to those of skill in the art that certain modifications, variations, and alternative constructions would be apparent, while remaining within the spirit and scope of the invention. In order to determine the metes and bounds of the invention, therefore, reference should be made to the appended claims.

GLOSSARY OF ABBREVIATIONS

- [0107] IMSI—International Mobile Subscriber Identity
- [0108] M2M, MTC—Machine Type Communication
- [0109] OA&M—Operation, Administration and Maintenance
- [0110] SIMTC—System Improvements for Machine Type Communication (3GPP Rel-11 work item)
- [0111] SCS—Services Capability Server
- [0112] IWF—Interworking Function
- [0113] extID—External Identifier (could be NAI, URI or FQDN)
- [0114] MSISDN—Mobile Subscriber Integrated Services Digital Network Number
- [0115] UE—User Equipment
 1. A method, comprising:
 - receiving a monitoring request regarding a user equipment or a category of devices;
 - performing a monitoring activity regarding the user equipment or the category of devices with respect to at least one suspicious event; and
 - responding to the monitoring request indicating whether monitoring will be performed for the user equipment or the category of devices.
 2. The method of claim 1, wherein the monitoring activity comprises selecting a serving node for monitoring services and registering the user equipment or the category of devices for monitoring service with the serving node.
 3. The method of claim 2, further comprising:
 - receiving a registration status response in response to the registering; and
 - forwarding the registration status toward a source of the monitoring request while responding to the monitoring request.
 4. The method of claim 1, wherein the suspicious event comprises at least one event of the following: a tracking

update occurs from a location outside an area allowed for the user equipment or from a certain device category; the user equipment or the device category accesses a network outside an allowed time interval or at a forbidden time interval; the user equipment or the device category is subscribed for packet switched services only but is performing a location update to obtain voice service; or the user equipment or the device category has exceeded an allowed data usage limit.

5. The method of claim 4, wherein the device category comprises a category of at least one of the following: smart phones, regular phones, machine type devices, smart meters, tablets, or dongles.

6. A method, comprising:

- requesting monitoring of a user equipment or a category of devices with respect to at least one suspicious event; and
- receiving a response to the monitoring request, wherein the response indicates a registration status of the monitoring.

7. The method of claim 6, wherein the requesting monitoring comprises sending a monitoring request to a machine type communication interworking function.

8. A method, comprising:

- receiving a request for monitoring a user equipment or category of devices with respect to at least one suspicious event;
- determining whether the monitoring is permitted; and
- responding to the request based on whether the monitoring is permitted.

9. The method of claim 8, further comprising:

- determining whether monitoring is permitted under a subscriber agreement corresponding to the user equipment, wherein the responding is based on the subscriber agreement of the user equipment.

10. The method of claim 9, further comprising:

- storing an identifier of the requestor of the monitoring.

11. A method, comprising:

- monitoring for a suspicious event with respect to a user equipment or a category of devices for which monitoring has been requested by a requestor;
- detecting an occurrence of the suspicious event with respect to the user equipment or the category of devices; and
- reporting the occurrence to the requestor.

12. The method of claim 11, wherein the reporting comprises sending an indication of the user equipment's international mobile subscriber identity to the requestor.

13. The method of claim 11, wherein the reporting comprises sending a report to a machine type communication interworking function.

14. A method, comprising:

- receiving a report of suspicious activity with respect to a user equipment or a category of devices for which monitoring has been requested by a requestor; and
- forwarding the report of the suspicious activity to the requestor.

15. The method of claim 14, further comprising:

- receiving, in the report, a user equipment's international mobile subscriber identity; and
- translating the user equipment's international mobile subscriber identity to an external identifier or mobile subscriber integrated services digital network number.